DOI FY 05 Aviation Mishaps

5 Aircraft Accidents

9 Incidents with Potential

DOI FY 05 Aviation Mishaps

The National Transportation Safety Board

NTSB 831.13 Flow and dissemination of accident or incident information.

(b) … Parties to the investigation may relay to their respective organizations information necessary for purposes of prevention or remedial action.

… However, no (release of) information… without prior consultation and approval of the NTSB.

This is PRELIMINARY information, and is provided for accident prevention purposes only

Talkeetna, AK
April 15, 2005

DeHavilland DHC-2 Beaver (wheel/ski)

Mission
Passenger and cargo transport

Damage
Substantial

Injuries
2 minor

Procurement
ARA

NTSB ID
ANC05LA058

Talkeetna, AK
April 15, 2005

Issues

Unnecessary risk taking

High risk pilot

Maintenance inspection

Pre-mission briefing

Wreckage preservation

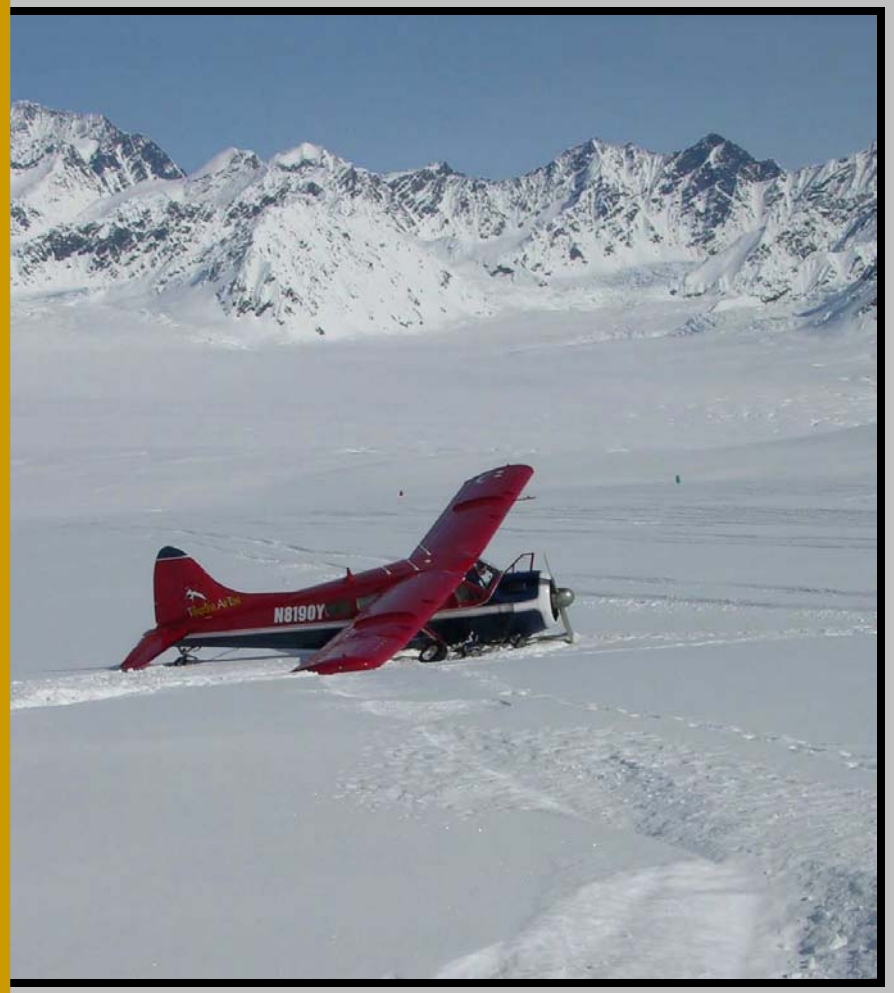
Talkeetna, AK
April 15, 2005

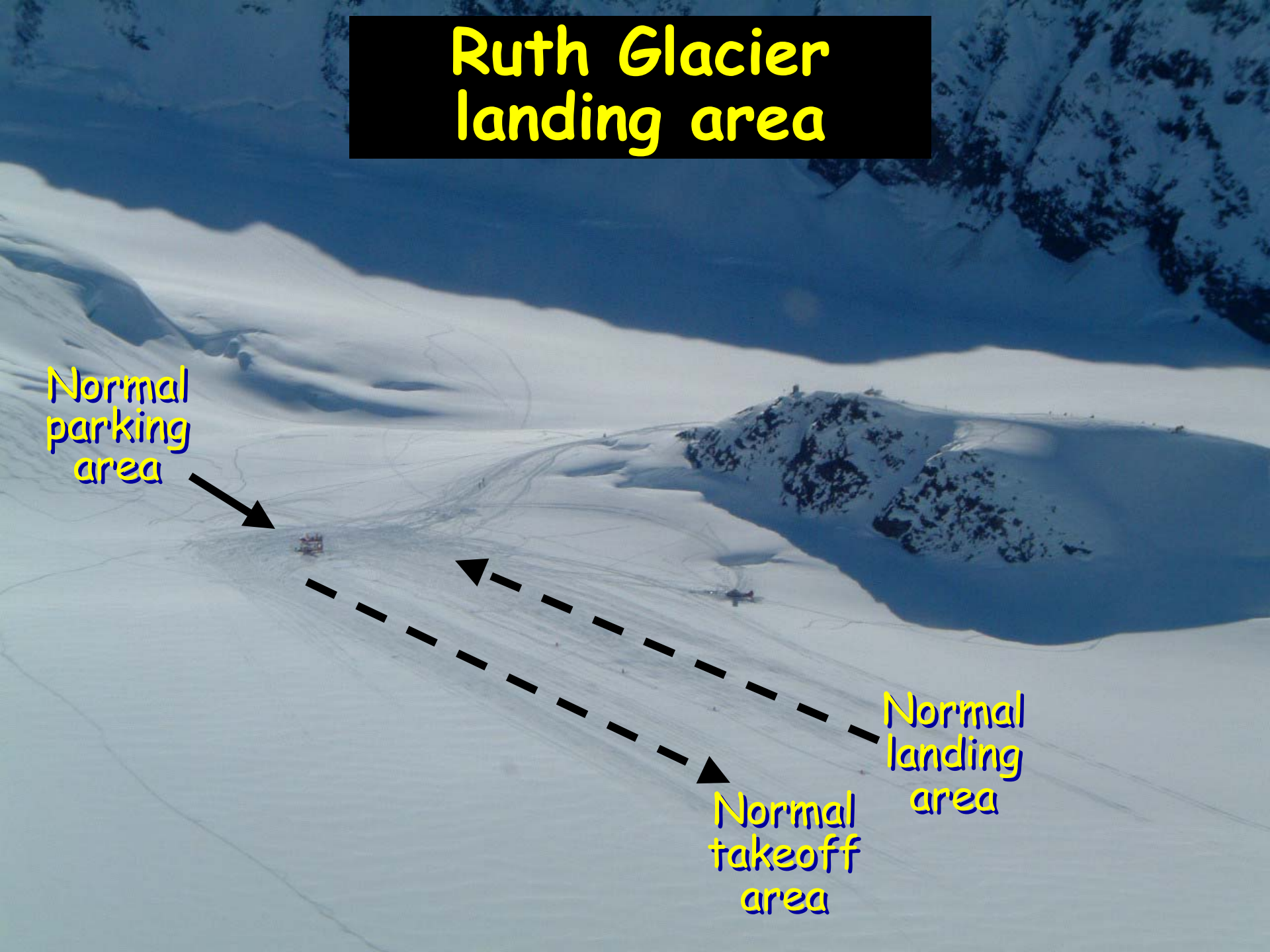
After landing on the Ruth Glacier, Denali National Park, the pilot taxied outside of the normal maneuver area to drop cargo in a convenient location.

While taxiing, the aircraft approached and attempted to clear a crevasse.

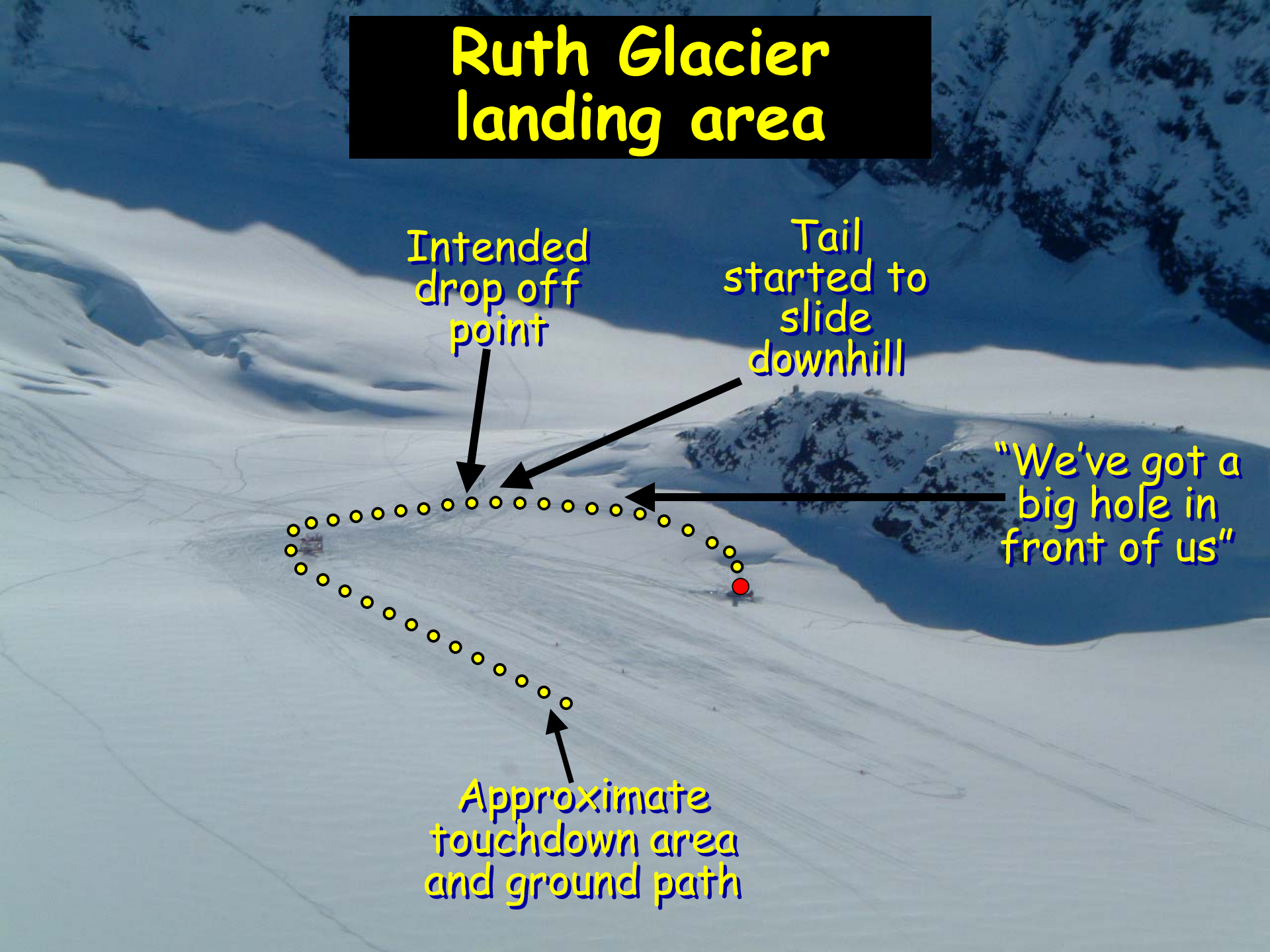
However, the aircraft sustained substantial damage while attempting to jump the crevasse.

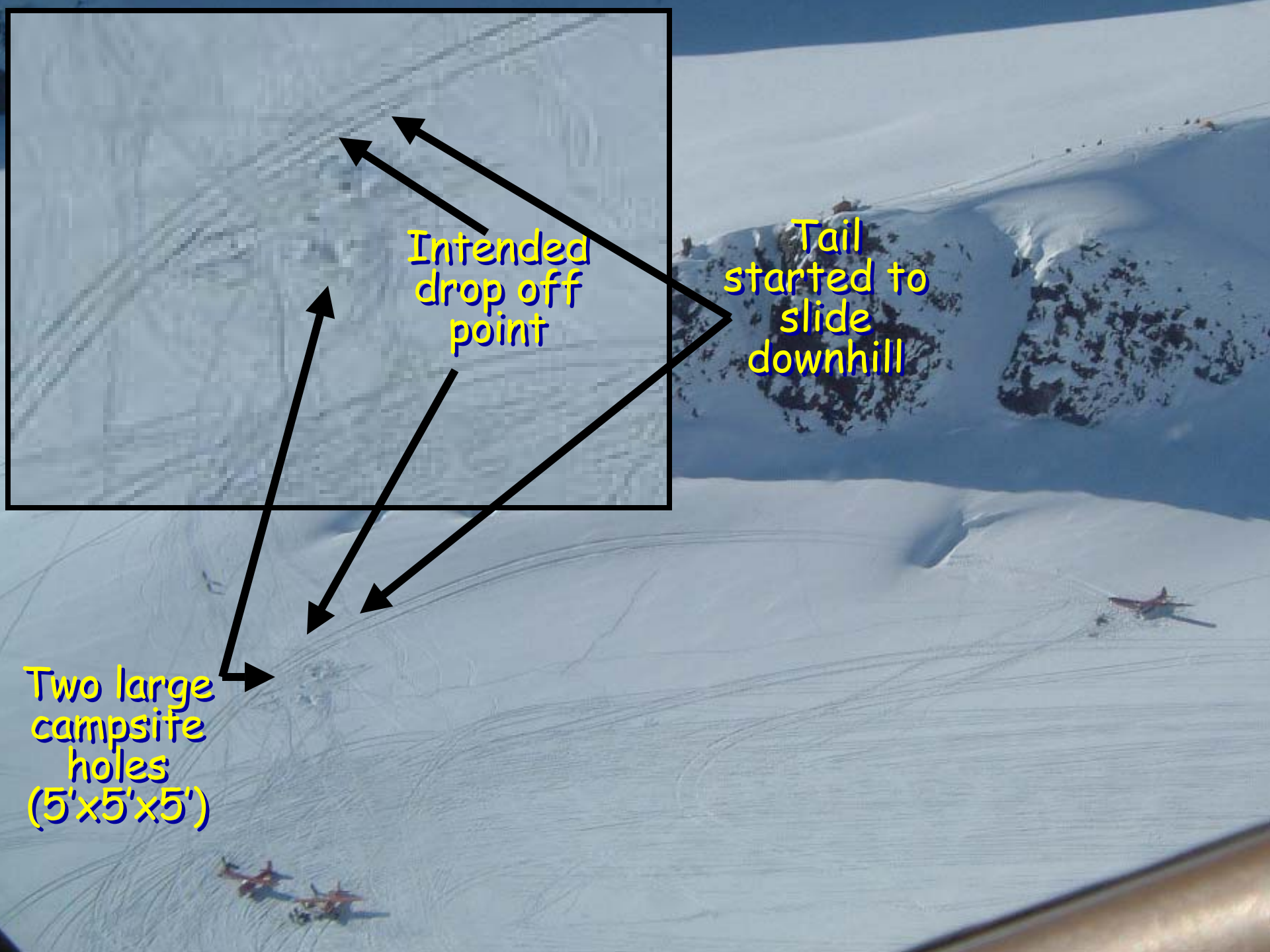
Two NPS passengers received minor injuries.

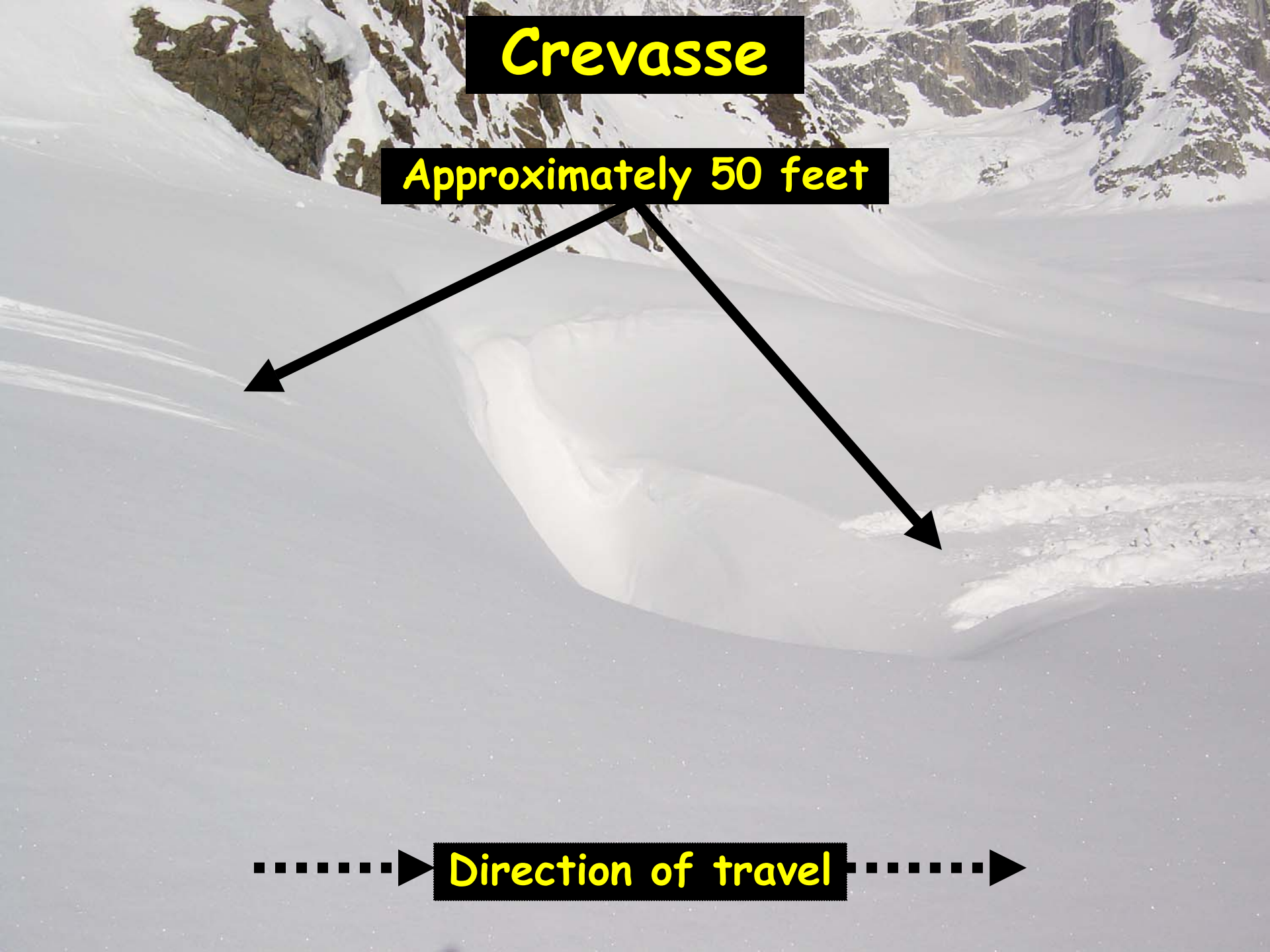



Ruth Glacier
landing area
Normal
parking
area
Normal
landing
area
Normal
takeoff
area

Ruth Glacier landing area




Intended drop off point
Tail started to slide downhill
Two large campsite holes (5'x5'x5')


Crevasse
Approximately 50 feet
Direction of travel


Crevasse
N8190Y
Nearly invisible
due to the slope


Damage to wing,
gear, and frame


Injury to rear seat passenger due to lack of shoulder harness and FAA authorized modification to the front seat.

NTSB Probable Cause
Talkeetna, AK, April 15, 2005

The National Transportation Safety Board

The National Transportation Safety Board determined that the probable cause of this accident was …

Probable Cause

"The pilot's selection of unsuitable terrain for taxi after landing, which resulted in the collapse of the main landing gear and structural damage to the right wing and forward fuselage. A factor associated with the accident was the rough and uneven terrain."

NBC AMD Observations
Talkeetna, AK, April 15, 2005

Corrective Actions/Options

Issues

- Conduct a more thorough background check to identify high-risk pilots

- Conduct a more thorough maintenance check to identify issues such as seats, that although technically legal, are unnecessarily dangerous

NBC AMD Observations
Talkeetna, AK, April 15, 2005

Corrective Actions/Options

Issues

- Improve wreckage preservation after an aircraft accident / incident

- Conduct a more thorough pre-mission briefing to improve communications and reduced risk

Delta Junction, AK
July 6, 2005

Cessna A185F (wheel)

Mission
Cargo transport

Damage
Substantial

Injuries
N/A

Procurement
Fleet

NTSB ID
ANC05TA106

Delta Junction, AK
July 6, 2005

Issues

Unnecessary risk taking

Go in light before you go in heavy

Pre-use inspection of landing areas

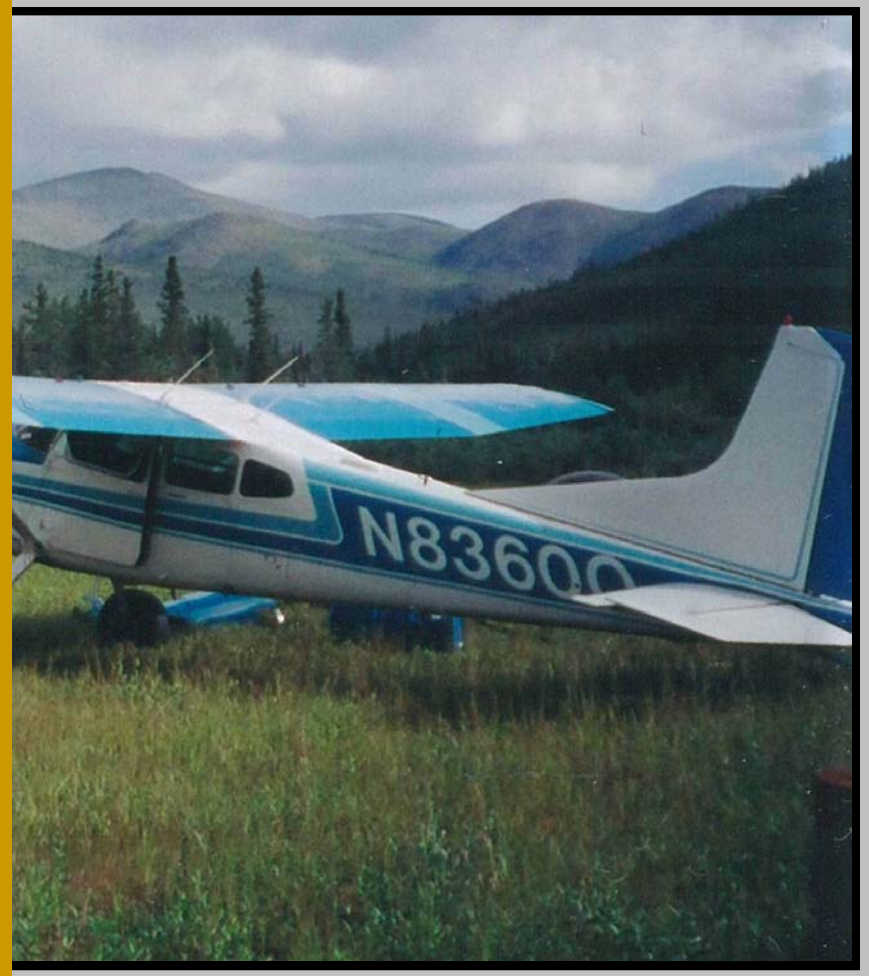
Medium risk syndrome

Delta Junction, AK
July 6, 2005

While ferrying a 55 gallon drum of jet fuel into an unprepared landing strip the aircraft's tail wheel struck the ground approximately 53 feet short of the landing area.

The aircraft became airborne for approximately 75 feet before the main gear touched down on the landing strip. Shortly thereafter the propeller impacted the runway.

The pilot was not injured, but the aircraft received substantial damage.



Last Chance Strip

N64 ° 23′ 49″
W144° 16′ 48″

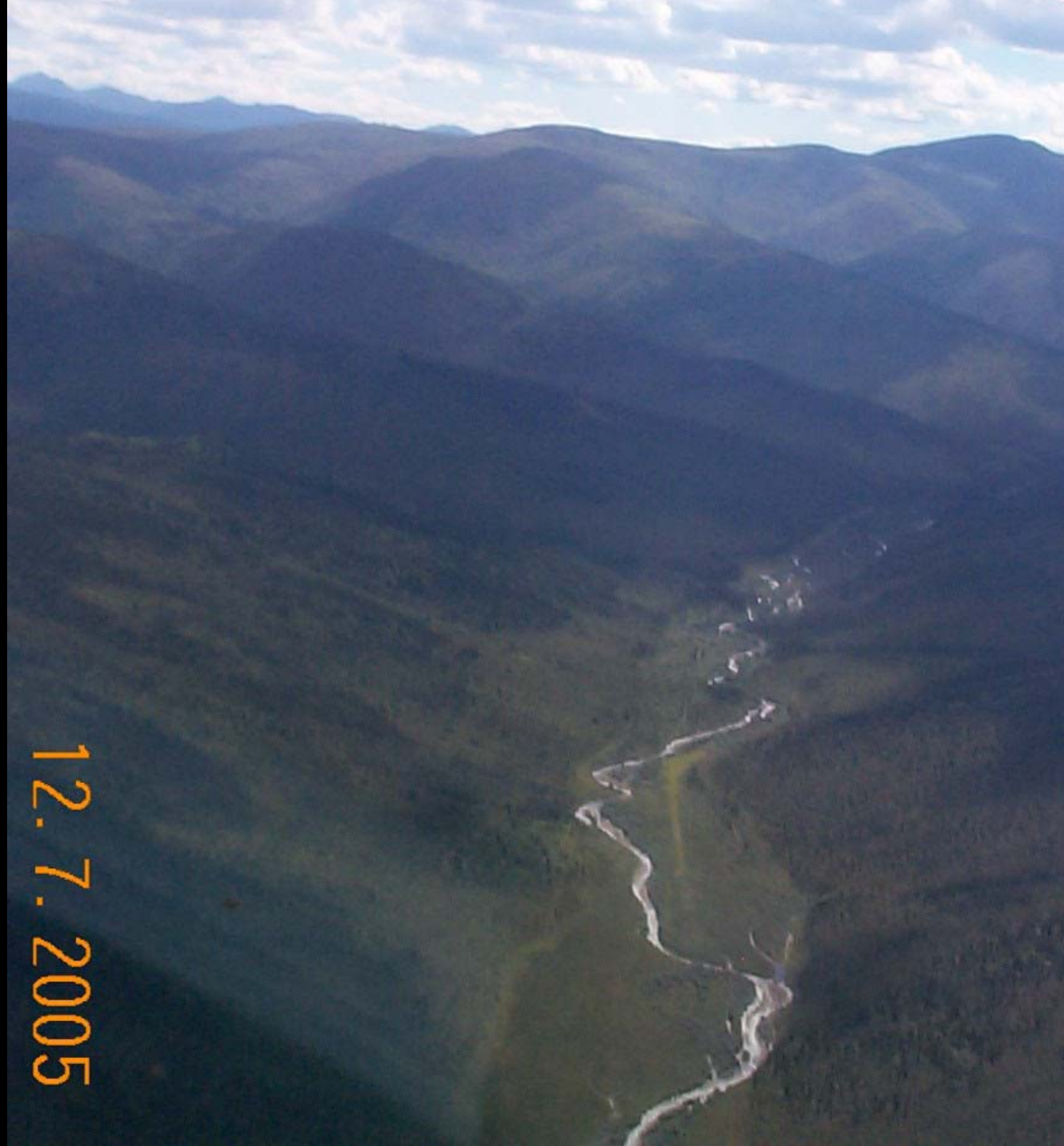
2,300′ MSL

32/14
1000′ x 16′
Gravel

Primarily a one-way strip due to 2-3 ° upslope (140 °)

The narrow valley makes going around, especially at high gross weight, impossible

Airstrip is not maintained




Final approach at
approximately 100' AGL
12. 7. 2005


Initial tail wheel impact approximately 53' prior to the cleared area
7. 21. 2005

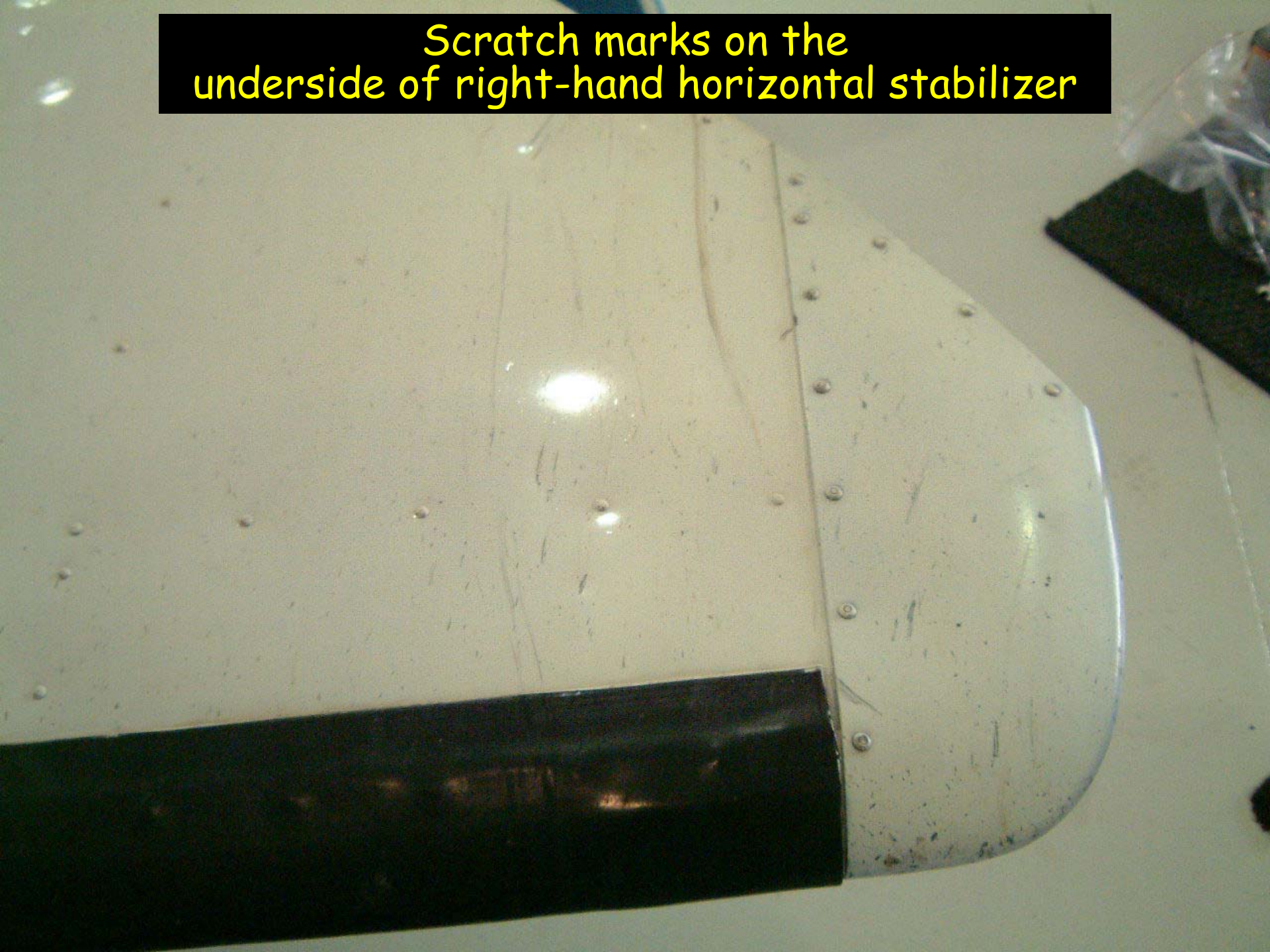
Rut where right main gear touched down

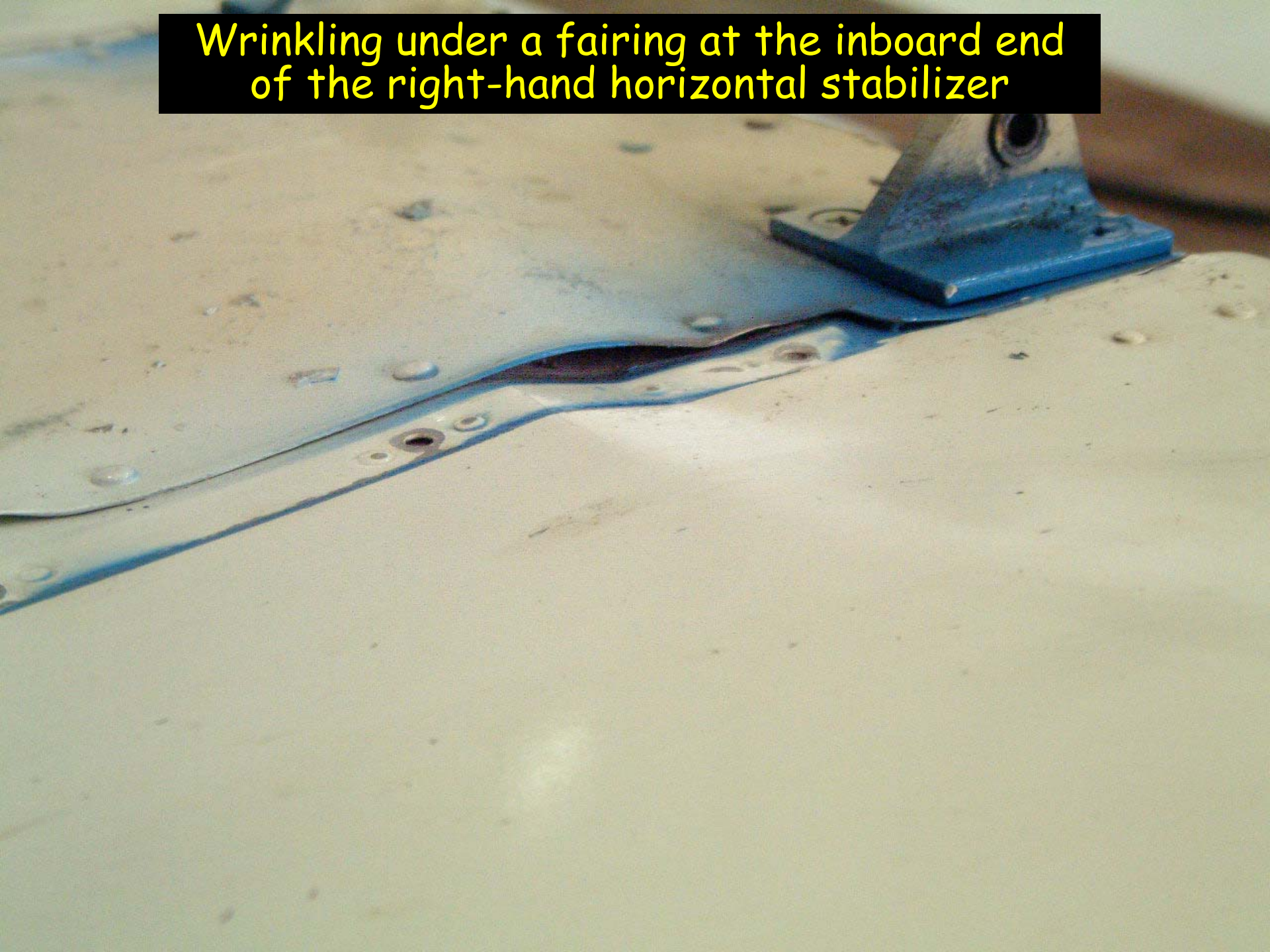

Area of propeller strikes
Area where right main gear went into brush

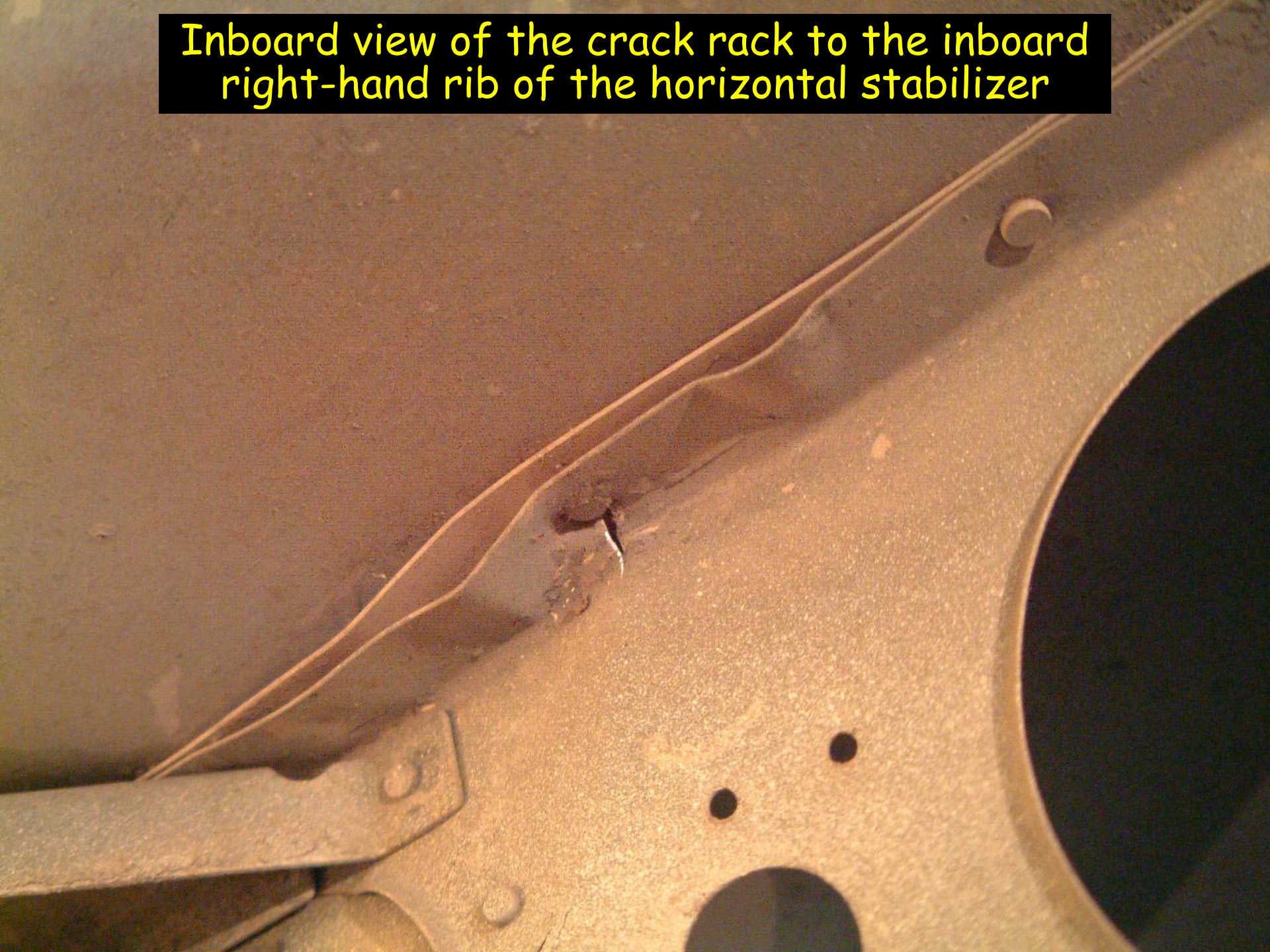

6 7 2005


Brush impacted by right horizontal stabilizer
7. 21. 2005

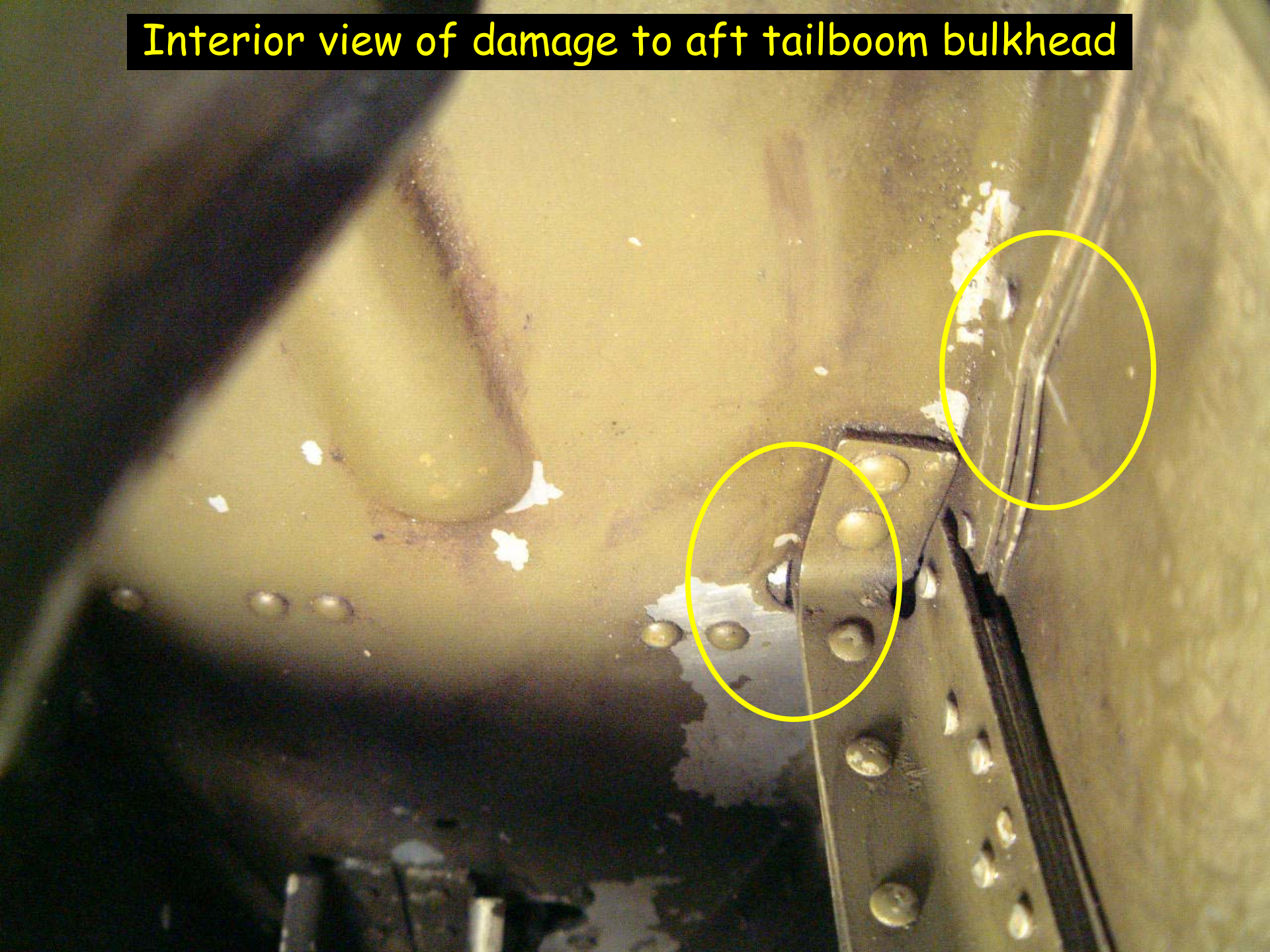
Horizontal Stabilizer (inverted)


Scratch marks on the
underside of right-hand horizontal stabilizer


Wrinkling under a fairing at the inboard end
of the right-hand horizontal stabilizer


Inboard view of the crack rack to the inboard
right-hand rib of the horizontal stabilizer


Fuselage damage caused by left horizontal stabilizer
and hidden under a fairing


Interior view of damage to aft tailboom bulkhead

NTSB Probable Cause
Delta Junction AK, July 6, 2005

The National Transportation Safety Board

The National Transportation Safety Board determined that the probable cause of this accident was …

Probable Cause

"The pilot misjudged distance / altitude during the landing touchdown and subsequent undershoot, and his failure to maintain directional control of the airplane during the landing roll, which resulted in an on-ground encounter with high vegetation."

NBC AMD Observations
Delta Junction, AK, July 6, 2005

Corrective Actions/Options

Discussion

- Pre-season inspection of high-risk landing areas --
  - ✓ Thorough, documented inspection using a checklist, with results available for pilot briefings
  - ✓ Conducted by an aviation specialist
  - ✓ Discrepancies repaired or marked depending on risk assessment

NBC AMD Observations
Delta Junction, AK, July 6, 2005

Corrective Actions/Options

Discussion

- Pilots should routinely make a practice approach and landing at low gross weights before taking loads into unfamiliar remote or unprepared landing areas

- Landings at locations where it is impossible to conduct a safe –go-around should not be considered routine

Delta Junction, AK
July 28, 2005

Hughes 500D

Mission
Cadastral Survey

Damage
Substantial

Injuries
N/A

Procurement
Exclusive Use

NTSB ID
ANC05TA111

Delta Junction, AK
July 28, 2005

Issues

Unnecessary risk taking

Land as soon as possible after suspected damage

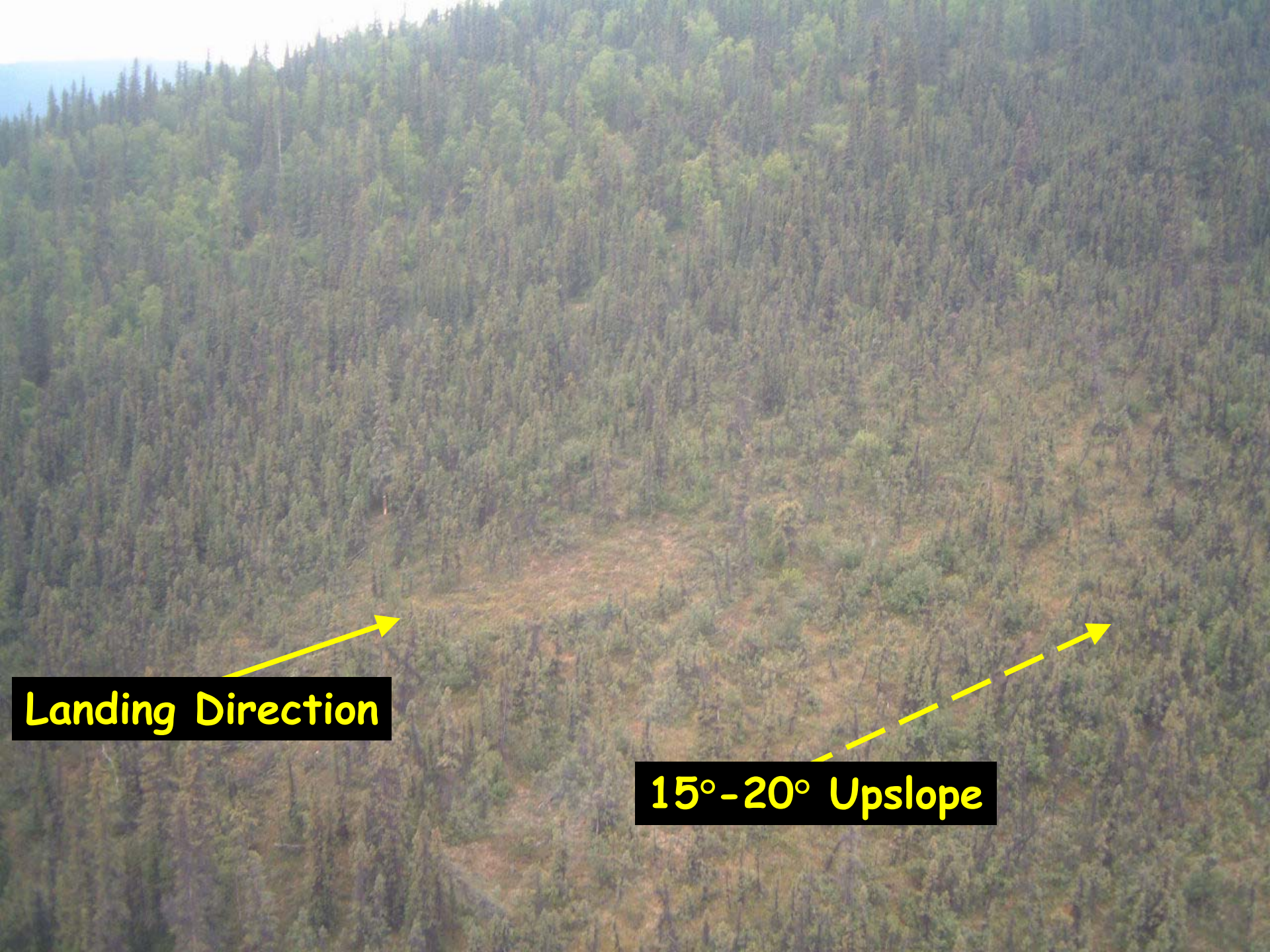
Safety training for ground personnel

Remote fuel site monitoring and maintenance

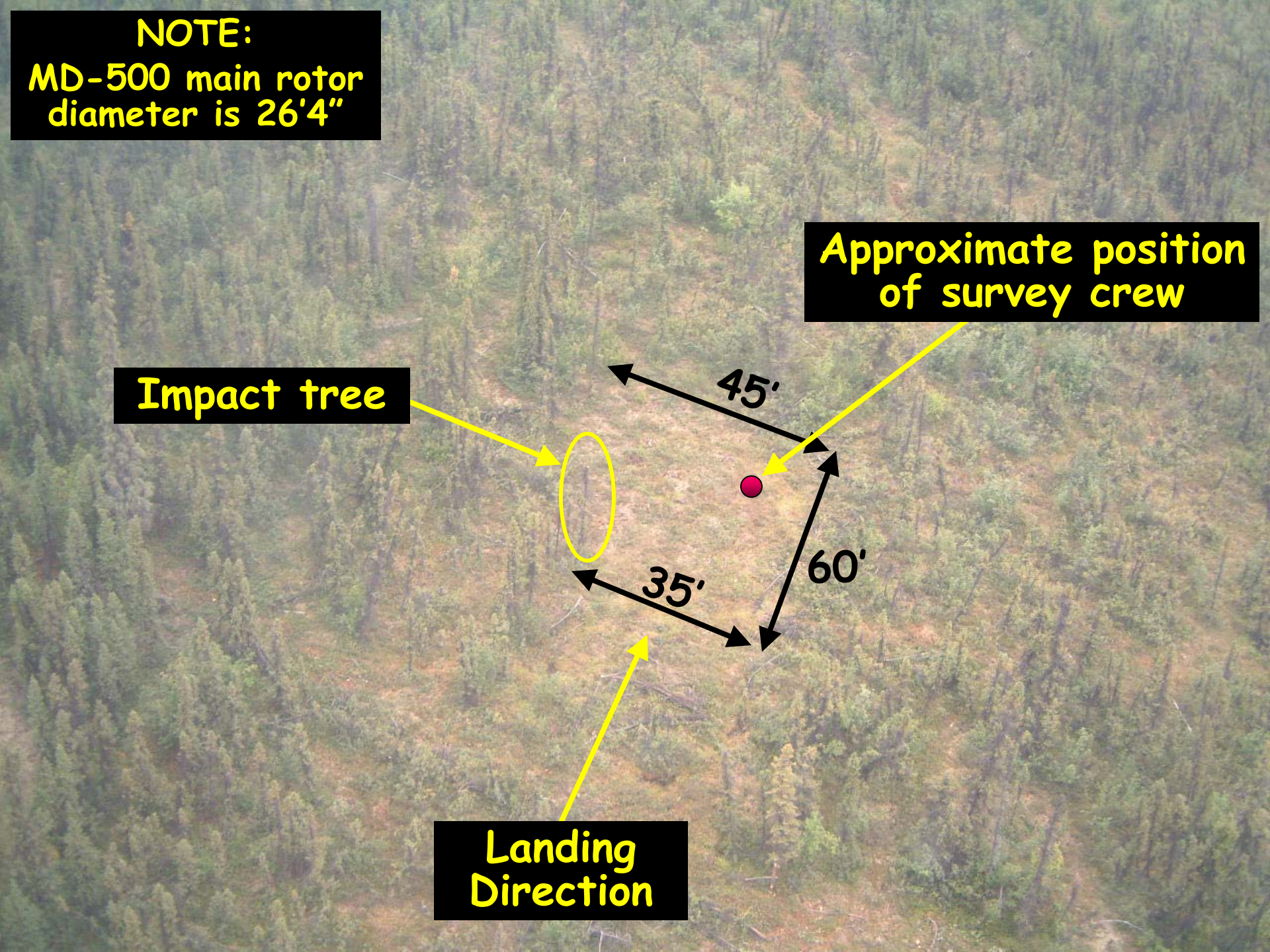
Delta Junction, AK
July 28, 2005

During a cadastral survey, the pilot of the aircraft struck the top of a Black Spruce tree while attempting an approach into a confined area to pick up two passengers.

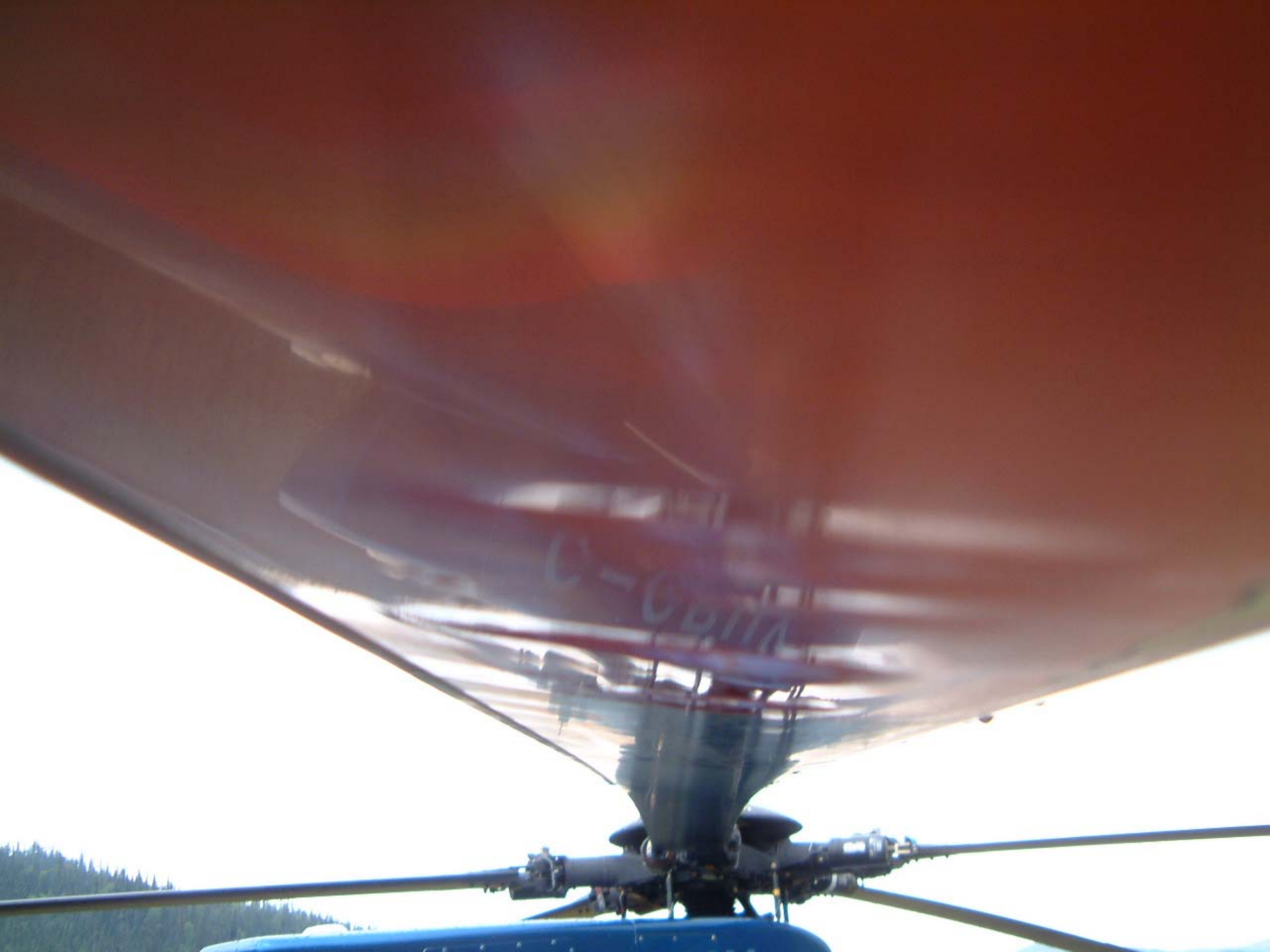
All five of the main rotor blades received damage.


Landing Direction
15°-20° Upslope

NOTE:
MD-500 main rotor diameter is 26'4"




Tree Marks



NTSB Probable Cause
Delta Junction AK, July 28, 2005

The National Transportation Safety Board

The National Transportation Safety Board determined that the probable cause of this accident was …

Probable Cause

"The pilot's failure to maintain clearance from trees during the approach to landing, which resulted in the main rotor blades striking a tree. A factor associated with the accident was the tree."

NBC AMD Observations
Delta Junction, AK July 28, 2005

The
RIGHT STUFF

Discussion

- Good Communication Procedures
- Installed Experimental Remote Camera for real time weather
- Excellent Base Operations support

NBC AMD Observations
Delta Junction, AK July 28, 2005

Corrective Actions/Options

Discussion

- Do not allow operations to continue after a blade strike is known or suspected to have occurred
- Train new crews in LZ clearing and safety procedures
- Remote fuel sites should be monitored and maintained properly

Coldfoot, AK
August 20, 2005

Piper PA-18

Mission
Law Enforcement

Damage
Substantial

Injuries
N/A

Procurement
Fleet

NTSB ID
ANC05TA126

Coldfoot, AK
August 20, 2005

Issues

- More complete aerial recon of remote landing sites
- Develop a back-up plan prior to landing
- Plan the flight, fly the plan (avoid last second changes)

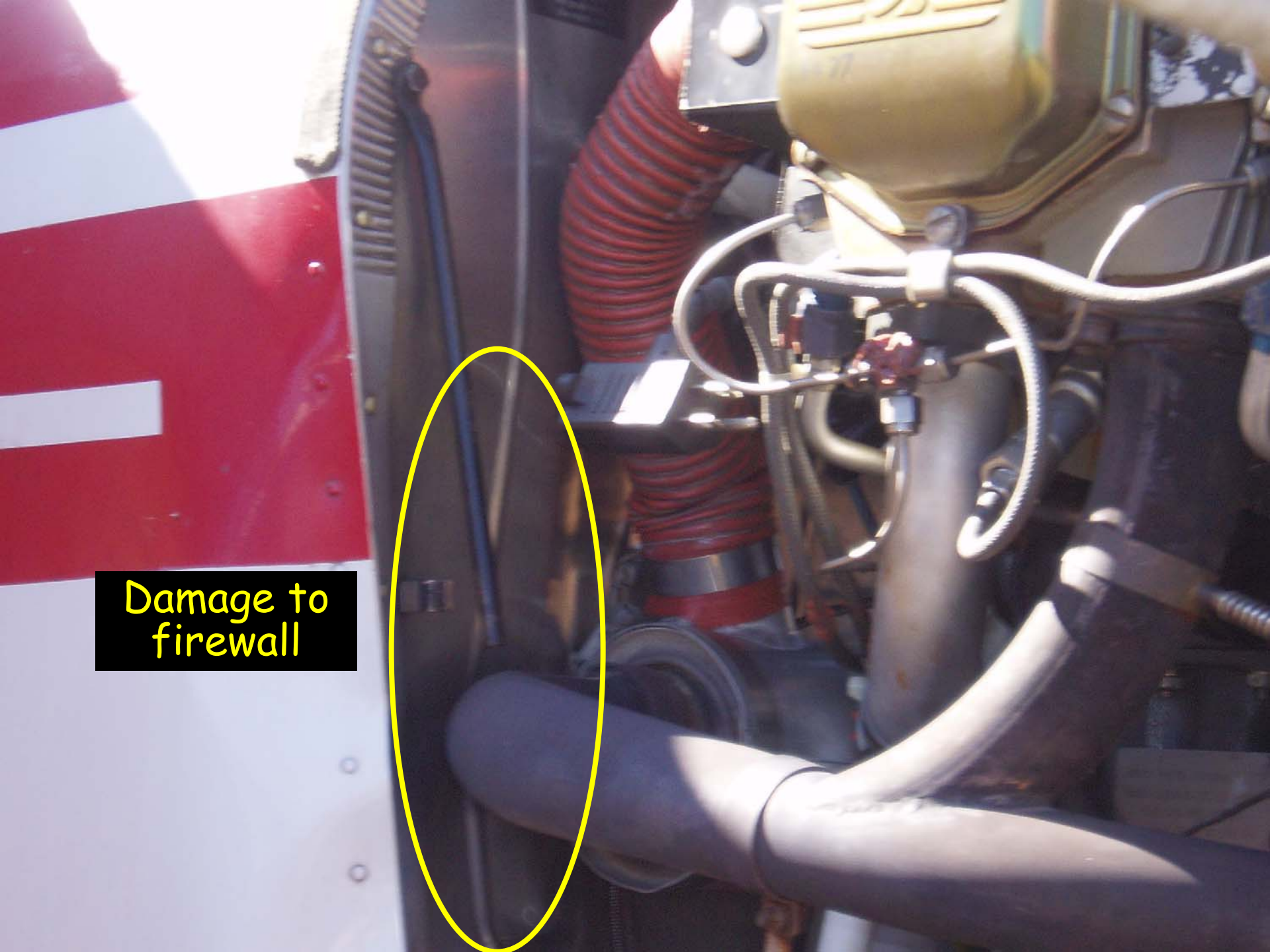
Coldfoot, AK
August 20, 2005

After landing to a remote "bush" airstrip the pilot attempted to taxi to the side to clear the strip.

During the taxi the left main landing gear hit a rut and the aircraft tipped forward on to its nose.

The pilot was not injured, but the aircraft received substantial damage to the firewall and forward fuselage.


Engine deflected to the right
and damage to propeller blades


Damage to firewall


N13833


NO SMOKING
N13633

NTSB Probable Cause
Coldfoot AK, August 20, 2005

The National Transportation Safety Board

The National Transportation Safety Board determined that the probable cause of this accident was …

Probable Cause

"The pilot's selection of unsuitable terrain for landing, which resulted in the airplane nosing down during the landing roll.

A factor associated with the accident was the rough and uneven terrain."

NBC AMD Observations
Coldfoot, AK July 20, 2005

Corrective Actions/Options

Discussion

- Conduct your aerial recons as though your life depends on it
- Have a primary plan… and a back-up plan (a way out)
- Avoid spontaneously changing your plan

Elko, NV
August 23, 2005

PZL M-18T Turbine Dromader

Mission
Fire Suppression

Damage
Substantial

Injuries
Minor

Procurement
Call When Needed

NTSB ID
LAX05TA277

Elko, NV
August 23, 2005

Issues

- Unnecessary risk taking
- Be alert to changing weather conditions - especially heavy winds
- Communications
- Don't hesitate to turn down a mission when appropriate

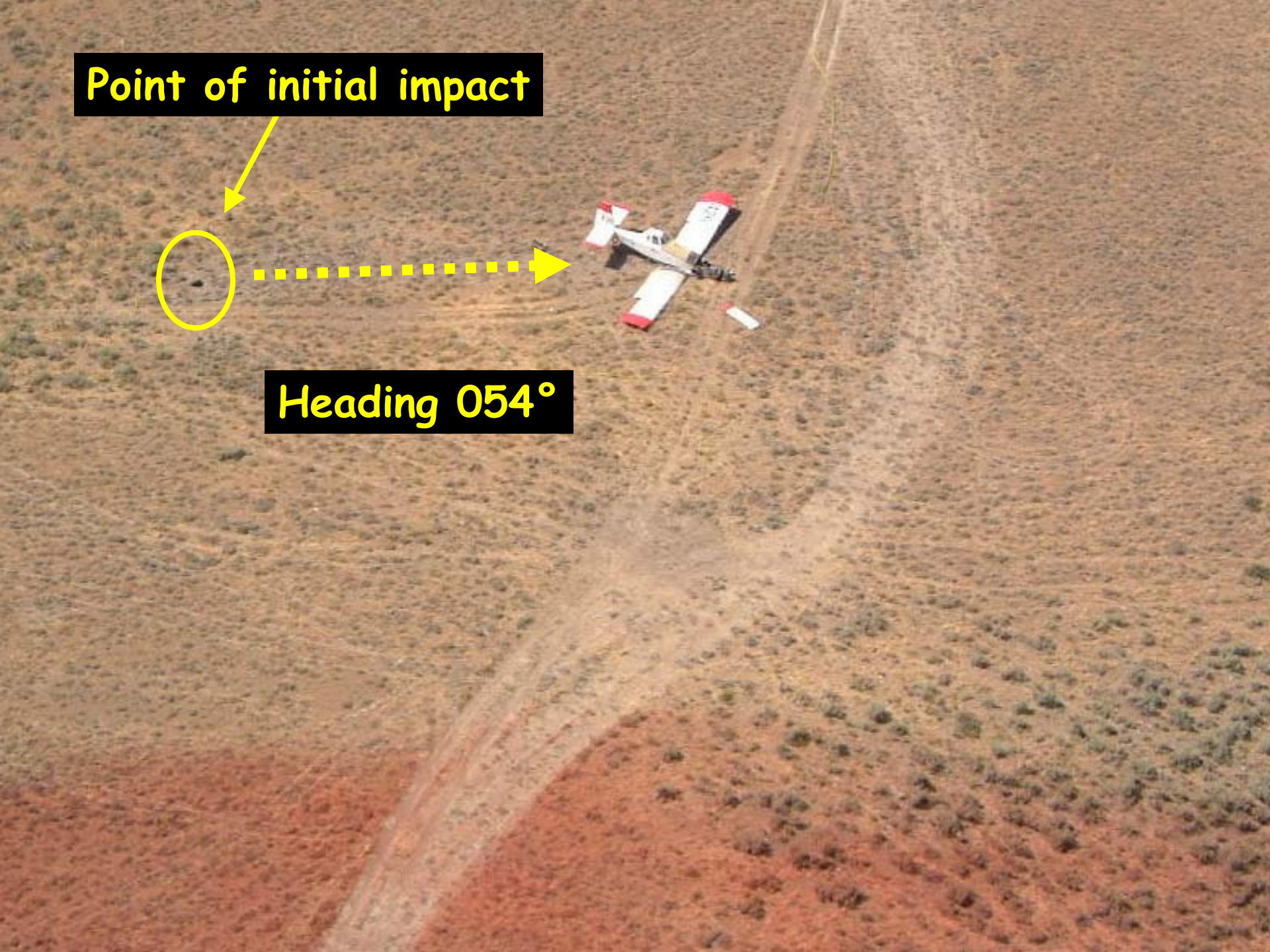
Elko, NV
August 23, 2005

After performing a retardant drop under downhill and downwind conditions the aircraft was unable to establish an adequate rate-of-climb to prevent ground impact.

The pilot elected to make an emergency off-airport landing under control rather than attempt to fly out.

The pilot received minor injuries.


426
N7077N


Point of initial impact
Heading 054°


N7077N

NBC AMD Observations
Elko, NV, August 23, 2005

The RIGHT STUFF

Issues

- Mishap reporting and response coordination was excellent
  - ✓ Proper notification to AM and Bureau National Office
  - ✓ Medical evacuation of pilot
  - ✓ Wreckage preservation

AM Observations
Elko, NV, August 23, 2005

Corrective Actions/Options

Issues

- Weather recognition
  - ✓ Be alert to changing weather conditions – especially heavy winds
- Keep lines of communication open
- Doing "dry runs" is an acceptable practice
- I am not going back out there because…"

DOI FY 05 Aviation Mishaps

Discussion

DOI FY 05 Aviation Mishaps

Ideas for Managing Risk

Avoid taking unnecessary risks

Medium risk syndrome

Project Aviation Plans

Pre-mission briefings

Pre-use inspections

Mitigate known risks

Document remaining hazards

Have an escape plan

Turn-down protocol

DOI FY 05 Aviation Mishaps

Lessons learned (again)

Use checklists

Don't fly in a damaged aircraft

Timely mishap reporting and SAFECOMs

Crew Resource Management
(speak up, and shut up, when appropriate)

Aviation Life Support Equipment
(take care of it and it will take care of you)